

## Read Before Using the Internet

Read this information before using the WEB BROWSER.

- The WEB BROWSER is not compatible with Java applications.
- You can download the supported types of files, such as videos, mp3 files, and images, but you cannot download files that are not supported by the TV. If you attempt to download an unsupported file, you will receive an error message instead.
- The web browser may not be able to access certain websites.
- The TV does not support playback of flash videos.
- E-commerce for online purchases is not supported.
- With websites that have scrollable windows, scrolling a window can result in corrupted characters.
- ActiveX is not supported.
- Certain options are not accessible in Link Browsing mode. (Switch to Pointer Browsing to activate those options.)
- Only a limited number of fonts are supported. Certain symbols and characters may not be displayed properly.
- The response to remote commands and the resulting on-screen display may be delayed while a web page is loading.
- Loading a web page may be delayed or suspended completely with certain operating systems.
- The copy and paste operations are not supported.
- When composing an email or a simple message, certain functions such as the font size and color selection may not be available.
- There is a limit to the number of bookmarks and the size of the log file that can be saved.
- The number of windows that can be opened concurrently differs with the search conditions and the TV model.
- The web browsing speed will differ with the network environment.
- Embedded videos in a web page cannot be played at the same time while the PIP (picture-in-picture) function is operating.
- If the Clock (⌚) > ⚙ Settings > System > Time > Clock) has not been set, the browsing history will not be saved.
- The browsing history is saved from latest to oldest, with the oldest entries being overwritten first.

- Depending on the types of video/audio codecs supported, it might not be possible to play certain video and audio files while playing HTML5 Video/Audio.
- Video sources from PC-optimized streaming service providers may not play properly on our proprietary WEB BROWSER.

## Read Before Playing Photo, Video, or Music Files

Read this information before playing media content.

### Limitations on use of photo, video, and music files

- The TV supports MSC (Mass Storage Class) USB devices only. MSC is a class designation for mass storage devices. Types of MSC devices include external hard drives, flash card readers, and digital cameras. (USB hubs are not supported.) These kinds of devices must be connected directly to the USB port. The TV may not be able to recognize a USB device or read the files on the device if it is connected with a USB extension cable. Do not disconnect USB devices while they are transferring files.
- When connecting an external hard drive, use the USB (HDD) port. We recommend that you use an external hard drive with its own power adapter.
- Certain digital cameras and audio devices may not be compatible with the TV.
- If there are multiple USB devices connected to the TV, the TV might not be able to recognize some or all the devices. USB devices that use high-power input should be connect to the USB [5V, 1A] port.
- The TV supports the FAT, exFAT, and NTFS file systems.
- After sorting files in the Folder view mode, the TV can display up to 1,000 files per folder. If the USB device contains more than 8,000 files and folders, however, some files and folders might not be accessible.
- The PTP (Picture Transfer Protocol) connection mode is available only for digital cameras. If you connect a smartphone or tablet to the TV using PTP mode, the TV will not recognize it.
- Certain files, depending on how they are encoded, may not play on the TV.
- Certain files are not supported on all models.

## Supported external subtitles

Name	Format
MPEG-4 Timed text	.txt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
Powerdivx	.psb
SMPTE-TT Text	.xml

## Supported internal subtitles

Name	Container
Xsub	AVI
SubStation Alpha	MKV
Advanced SubStation Alpha	MKV
SubRip	MKV
VobSub	MKV
MPEG-4 Timed text	MP4
TTML in smooth streaming	MP4
SMPTE-TT Text	MP4
SMPTE-TT PNG	MP4

## Supported image formats and resolutions

File extension	Format	Resolution
*.jpg	JPEG	15360 x 8640
*.jpeg		
*.png	PNG	4096 x 4096
*.bmp	BMP	4096 x 4096
*.mpo	MPO	15360 x 8640


## Supported music formats and codecs

File extension	Format	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a			
*.mpa	MPEG4	AAC	
*.aac			
*.flac	FLAC	FLAC	Supports up to 2 channels
*.ogg	OGG	Vorbis	Supports up to 2 channels
*.wma	WMA	WMA	Supports WMA 10 Pro up to 5.1 channels. WMA lossless audio is not supported. Supports up to the M2 profile.
*.wav	wav	wav	
*.mid	midi	midi	Supports type 0 and type 1. Seek is not supported. Supports USB device only.
*.midi			
*.ape	ape	ape	
*.aif	AIFF	AIFF	
*.aiff			
*.m4a	ALAC	ALAC	

## Adjusting the Sound Quality


Change the Sound Mode and adjust Expert Settings.

### Choosing a sound mode

Home > Settings > Sound > Sound Mode 

You can select a sound mode to optimize your listening experience.

### Configuring advanced sound settings


Home > Settings > Sound > Expert Settings 

You can personalize the sound quality by adjusting the following settings.

- Balance
- Equalizer
- TV Installation Type
- Wireless Speaker Manager

 For more information, refer to "[Listening to the TV through Bluetooth devices.](#)"

- HDMI Audio Format
- Audio Format
- Audio Delay
- Auto Volume


 If you want to use the volume control of a connected source device to control the sound, deactivate **Auto Volume**. When you use **Auto Volume** with a source device, the device's volume control may not function properly.

- Sound Feedback
- Reset Sound

## Using the Sound Support Functions

Configure the sound settings for your TV.

### Selecting speakers

⌂ > ⚙ Settings > Sound > Select Speaker 

You can select which speakers the TV uses for audio output.

- When **Select Speaker** is set so that sound comes from external speakers only, the Volume and Mute buttons and some Sound functions are disabled.

### Listening to the TV through Bluetooth devices

⌂ > ⚙ Settings > Sound > Expert Settings > Wireless Speaker Manager > Bluetooth Audio Devices

You can connect Bluetooth audio devices to the TV. They must be paired using the TV's Bluetooth function. For more information on pairing, refer to the Bluetooth audio device's operating manual.

- This function is not available on certain models in specific geographical areas.
- If the TV fails to find a Bluetooth audio device, place the device closer to the TV, and then select **Refresh**.
- When you turn on a paired Bluetooth audio device, the TV detects it automatically, and then displays a pop-up window. Use this pop-up window to activate/deactivate the Bluetooth audio device.
- The sound quality may be affected by the condition of your wireless network.
- To connect a Samsung audio device that supports **TV SoundConnect** to the TV, change the mode on the Samsung audio device to **TV SoundConnect**.
- The devices connected by the **TV SoundConnect** function can be controlled in **Bluetooth Audio Devices**.
- Before using a Bluetooth audio device, refer to "[Read Before Using Bluetooth Devices](#)."

## Listening to the TV through a Multiroom speaker

- ⓘ This function is not available on certain models in specific geographical areas.

## Creating surround effect through Multiroom speaker

⌂ > ⚙ Settings > Sound > Expert Settings > Wireless Speaker Manager > Multiroom Link Type

When a multiroom speaker is used, an optimal sound can be output by creating surround effect. You can select any of the configurations with and without sound bar.

## Configuring the surround effect settings through Multiroom speaker

⌂ > ⚙ Settings > Sound > Expert Settings > Wireless Speaker Manager > Multiroom Link Settings


You can hear the TV sound after configuration of the surround effect through Multiroom speaker.

- ⓘ The Multiroom Link function is only available when at least one Samsung Multiroom Link compatible speaker is connected to the TV.
- ⓘ The Multiroom Link function is deactivated when you activate Smart View (Screen Mirroring).
- ⓘ The audio from the secondary device(s) may lag behind the audio and video of the main device that is playing the source content.
- ⓘ For more information, refer to the Multiroom Link manual on the Samsung web site. ([www.samsung.com](http://www.samsung.com))

## Setting the Time and Using the Timer

Set the current time and use the timer function.

### Setting the current time

🏠 > ⚙️ Settings > System > Time 

You can set the Clock manually or automatically. Once the Clock is set, you can view the current time on the TV anytime.

- 🔔 The clock must be reset every time the power is disconnected.

### Setting the clock using digital broadcast info

🏠 > ⚙️ Settings > System > Time > Clock > Clock Mode > Auto

- 🔔 This function works only when the TV's antenna jack is connected to either an antenna or a cable output and is receiving digital broadcasts.
- 🔔 Depending on the broadcast signal, the displayed time may differ.
- 🔔 The accuracy of the time information received may differ with the channel and signal.

### Changing the current time

🏠 > ⚙️ Settings > System > Time > Clock > Time Offset

- 🔔 **Time Offset** adjusts the time through a network connection. This function is only available if **Clock Mode** is set to **Auto** and the TV is connected to the Internet through a local area network.
- 🔔 **Time Offset** adjusts the time if the TV fails to receive time information through normal digital broadcast signals.

### Setting the clock manually

🏠 > ⚙️ Settings > System > Time > Clock > Clock Mode > Manual > Clock Set



## Using the timers

### Using the sleep timer

⏏ > ⚙ Settings > System > Time > Sleep Timer

You can use this function to automatically shut off the TV after a pre-set period of time. You can set the timer in 30 minute increments for up to 3 hours.

### Turning on the TV using the on timer

⏏ > ⚙ Settings > System > Time > On Timer

You can set On Timer to make the TV turn on automatically at a specific time. On Timer is only available when the Clock has already been set.

The On Timer function lets you select a source for the TV to use when it turns on. If you want to play content saved in a USB device or content from an HDMI or Component source, such as a DVD player, Blue-ray player, or cable/satellite box, connect the device to the TV before you start On Timer setup and turn it on. For On Timer to function, you must keep the device connected to the TV.

Music and Photo options let you specify a USB device folder containing music files in the music field and/or a folder containing photos in the photo field. If you select both a folder that contains music files and a folder that contains photo files, the TV plays the music files and displays the photos at the same time.

- If the folder that you choose has sub-folders, you can select a sub-folder in the same way.
- This function does not work properly if the selected USB device does not contain media files or a folder has not been specified.
- The slideshow will not start if there is only one image file on the USB device.
- Folders with long names cannot be selected.
- Make sure to use different folder names for multiple USB devices.
- Use a USB memory stick or multi-card reader. On Timer may not work with certain battery-powered USB devices, MP3 players, or PMPs because the TV may take too long to recognize the device.

### Turning off the TV using the off timer

⏏ > ⚙ Settings > System > Time > Off Timer

## Using the Screen Burn Protection and Energy Saving Functions

Protect the screen from screen burn-in and reduce the TV's energy consumption.

### Preventing screen burn

🏠 > ⚙️ Settings > System > Expert Settings > Auto Protection Time

Still images can leave burned-in after-images if left on the screen for a long period of time. To protect the screen, go to Auto Protection Time, and then select a time setting from the list. If a still image is shown on the screen for longer than the time that you selected, the TV automatically activates the Screen Burn Protection function.

### Reducing the energy consumption of the TV

🏠 > ⚙️ Settings > System > Eco Solution

You can adjust the brightness level of the TV and prevent overheating to reduce overall power consumption.

- Eco Sensor

Automatically adjusts the brightness level of the TV, according to the ambient light level, to reduce power consumption. If the Eco Sensor has adjusted the screen's brightness level, you can select Min. Backlight to manually adjust the minimum screen brightness.

- Energy Saving Mode

Allows you to select a brightness setting from the list to reduce the TV's power consumption.

- Motion Lighting

Adjusts the brightness in response to on-screen movements to reduce power consumption.

- Auto Power Off

Automatically turns off the TV to prevent overheating if there is no operation for the length of time you specify (4, 6, or 8 hours).

## Using Anynet+ (HDMI-CEC)

Control the external devices connected via Anynet+ (HDMI-CEC) with the remote control.

You can use the TV's remote control to control external devices that are connected to the TV by an HDMI cable and that support Anynet+ (HDMI-CEC). Note that you can only set up and operate Anynet+ (HDMI-CEC) with the remote control.

### Connecting an external device through Anynet+ and using their menus

⏏ > ⚙ Settings > System > Expert Settings > Anynet+ (HDMI-CEC)




1. Set Anynet+ (HDMI-CEC) to On.
  2. Connect an HDMI-CEC-compliant device to the TV.
  3. Turn on the connected external device. The device is automatically connected to the TV. After connection is finished, you can access the menu of the connected device on your TV screen using your TV remote and control the device.
- ⏏ The connecting process can take up to 2 minutes to complete.

### Read before connecting an Anynet+ (HDMI-CEC) device

- ⏏ You can configure the TV's Universal Remote to control third-party cable boxes, Blu-ray players, and home theaters that do not support HDMI-CEC. For more information, refer to "[Controlling External Devices with the Samsung Smart Remote - Using the Universal Remote](#)."
- ⏏ Anynet+ cannot be used to control external devices that do not support HDMI-CEC.
- ⏏ Anynet+ (HDMI-CEC)-enabled devices must be connected to the TV with an HDMI cable. Note that some HDMI cables may not support Anynet+ (HDMI-CEC).
- ⏏ The TV remote control may not work under certain circumstances. If this occurs, set up the device as an Anynet+ (HDMI-CEC)-enabled device again.
- ⏏ Anynet+ (HDMI-CEC) works only with external devices that support HDMI-CEC and only when those devices are either in standby mode or turned on.
- ⏏ Anynet+ (HDMI-CEC) can control up to 12 compliant external devices (up to 3 of the same type) except for home theaters. Anynet+ (HDMI-CEC) can control only one home theater system.
- ⏏ To listen to 5.1-channel audio from an external device, connect the device to the TV via an HDMI cable and connect a 5.1 home theater system directly to the external device's digital audio output connector.
- ⏏ If an external device has been set up for both Anynet+ and a universal remote control, the device can be controlled only with the universal remote control.

## Updating the TV's Software



View your TV's software version and update it if necessary.


 >  Settings > Support > Software Update 

### Updating the TV's software to the latest version



- ⚠ DO NOT turn off the TV's power until the update is complete. The TV will turn off and on automatically after completing the software update. Video and audio settings may be reset to their defaults after a software update.

#### Updating through the Internet


 >  Settings > Support > Software Update > Update now

-  Updating from the Internet requires an active Internet connection.



#### Updating through the USB device

 >  Settings > Support > Software Update > Update now




After downloading the update file from the website and storing it on a USB device, connect the USB device to the TV for update.

-  To update using a USB flash drive, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.

### Updating the TV automatically

 >  Settings > Support > Software Update > Auto Update

If the TV is connected to the Internet, you can have the TV's software update itself automatically while you are watching the TV. When the background update is completed, it is applied the next time the TV is turned on.

-  This function may take a longer time if another network function is running concurrently.
-  This function requires an Internet connection.
-  If you agree to the Smart Hub terms and conditions, Auto Update is set to On automatically. If you do not want the TV's software to update itself automatically, set Auto Update to Off.

## Protecting the TV from Hacking and Malicious Code

Protect your TV from hacking attempts and malicious code.

🏠 > ⚙️ Settings > System > Expert Settings > Smart Security

You can use Smart Security to protect the TV from hacking and malicious code when it is connected to the Internet.

### Checking the TV and connected storage for malicious code

🏠 > ⚙️ Settings > System > Expert Settings > Smart Security > Scan

If malicious code is found, the results of the scan will appear on the screen. This result window displays all malicious code found. You can quarantine (isolate) the code. Quarantining prevents it from executing.

1. Select all the malicious code to quarantine.
2. Select Isolate. The selected malicious code is relocated to the Isolated List.

✎ The **Isolated List** displays all quarantined malicious codes.

### Scanning for viruses in real time

🏠 > ⚙️ Settings > System > Expert Settings > Smart Security > Real-Time Monitoring


### Viewing scan results

🏠 > ⚙️ Settings > System > Expert Settings > Smart Security > Monitoring Results


## Using Other Functions

View other functions.


### Running the accessibility functions

🏠 > ⚙️ Settings > System > Accessibility 

### Enabling voice guides for the visually impaired

🏠 > ⚙️ Settings > System > Accessibility > Voice Guide 

You can activate voice guides that describe the menu options aloud to aid the visually impaired. To activate this function, set **Voice Guide** to **On**. With **Voice Guide** on, the TV provides voice guides for channel change, volume adjust, information on current and upcoming programs, schedule viewing, other TV functions, various content in the Web Browser, and in Search.

 The **Voice Guide** is provided in the language that is specified on the **Language** screen. However, some languages are not supported by **Voice Guide** even though they are listed in the **Language** screen. **English** is always supported.

### Changing the volume, speed, and pitch of the Voice Guide

You can configure the volume, pitch, speed, and level of the Voice Guide.

### Enabling audio for the video description function



🏠 > ⚙️ Settings > System > Accessibility > Video Description

You can activate an audio guide that provides an audio description of video scenes for the visually impaired. This function is only available with broadcasts that provide this service.

## Showing captions

 >  Settings > System > Accessibility > Caption > Caption

Set Caption to On to watch programs with the captions displayed.

-  Captions are not displayed by programs that do not support captions.
-  The TV cannot control or modify DVD or Blu-ray subtitles. To control DVD or Blu-ray subtitles, use the sub-title feature of the DVD or Blu-ray player and the player's remote control.

## Selecting the caption language


 >  Settings > System > Accessibility > Caption > Caption Mode

- Default / CC1 ~ CC4 / Text1 ~ Text4  
(Analog channels only) Operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcast signal, the analog caption function may or may not work with digital channels.)
- Default / Service1 ~ Service6 / CC1 ~ CC4 / Text1 ~ Text4  
(Digital channels only) Works with digital channels. Service1 ~ Service6 may not be available in digital caption mode depending on the broadcast.




## Setting the digital caption related options

 >  Settings > System > Accessibility > Caption > Digital Caption Options




You can change the font color, background color, and size settings.

-  The foreground and background colors and opacity settings cannot be the same.




## Adjusting the menu transparency

 >  Settings > System > Accessibility > Settings Menu Transparency 

You can adjust the menu's transparency.


-  Setting **High Contrast** ( >  Settings > System > Accessibility > High Contrast) to On automatically switches the menu display mode to opaque. You cannot manually change the **Settings Menu Transparency** settings.

## White text on black background (high contrast)

 >  Settings > System > Accessibility > High Contrast 


You can change major service screens to white text on a black background or change the transparent TV menus to opaque so that text can be more easily read. To activate this function, set High Contrast to On.

## Enlarging the font (for the visually impaired)


⌂ > ⚙ Settings > System > Accessibility > Enlarge 

You can enlarge the size of the font on the screen. To activate, set Enlarge to On.


## Learning about the remote control (for the visually impaired)

⌂ > ⚙ Settings > System > Accessibility > Learn Remote Control 

This function helps individuals with a visual impairment to learn the positions of the buttons on the remote control. When this function is activated, you can press a button on the remote control and the TV will tell you its name. To return to the previous screen, press the ⏮ button twice. To exit, press and hold the ⏻ button.


 This function is only available in the U.S.A. and Canada.

## Listening to the TV through Bluetooth devices (for the hearing impaired)


⌂ > ⚙ Settings > System > Accessibility > Multi-output Audio 

You can turn on both the TV speaker and Bluetooth devices at the same time. When this function is active, you can set the volume of the Bluetooth devices higher than the volume of the TV speaker.

 This function is not available on certain models in specific geographical areas.

 When you connect Bluetooth devices to the TV, the **Multi-output Audio** is activated. For more information about connecting Bluetooth devices to the TV, refer to "[Listening to the TV through Bluetooth devices.](#)"

## Configuring advanced system settings

⌂ > ⚙ Settings > System > Expert Settings 

### Changing the menu language

⌂ > ⚙ Settings > System > Expert Settings > Language



## Setting up a password

### ⌂ > ⚙ Settings > System > Expert Settings > Change PIN

The PIN input window appears. Enter a PIN. Enter it again to confirm it. The default PIN is 0000.

If you forget your PIN, you can reset it with your remote control. With the TV turned on, press the following buttons on the remote control in the order shown to reset the PIN to 0000: VOL → Volume Up → ⏮ → Volume Down → ⏮ → Volume Up → ⏮. On the standard remote control: ⏮ → (+) (Volume Up) → RETURN → (-) (Volume Down) → RETURN → (+) (Volume Up) → RETURN.

## Enabling/Disabling the front indicators

### ⌂ > ⚙ Settings > System > Expert Settings > Light Effect

- ⓘ The color of the TV's indicator lights may differ by the model.
- ⓘ This function is not available on certain models in specific geographical areas.

## Registering the TV as a DivX-certified device (watching for pay DivX movies)

### ⌂ > ⚙ Settings > System > Expert Settings > DivX® Video On Demand

- ⓘ Digital Rights Management (DRM) is a technical security mechanism that protects the content provider's copyright.
- ⓘ You can watch recorded movies or free DivX movies without registration.
- ⓘ Visit the DivX website (<http://www.divx.com>) and log in to your user account before registering the TV as a DivX-certified device. If you do not have an account, create one.

## Checking Notifications

### ⌂ > ⚙ Settings > System > Expert Settings > View Notifications

You can view the list of event messages generated by the TV. View Notifications appears on the screen when events such as an update release for an app or a Samsung Account login/logout occurs.

- ⓘ To delete all notifications, select **Delete All**.
- ⓘ To check the SMART TV's service notifications in a WEB BROWSER, select **Service Notice**.

## Locking/Unlocking the TV Controller or Control Stick

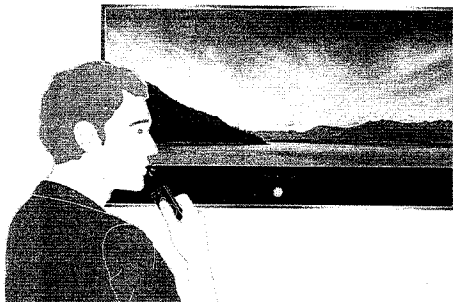
### ⌂ > ⚙ Settings > System > Expert Settings > TV Controller Lock or Control Stick Lock

- ⓘ The actual name of this function may differ depending on the model.

## Using Voice Interaction

Access and run certain menu options and functions using voice commands.

- Availability depends on the specific model.



- The image on your TV may differ from the image above depending on your model and geographical area.
- When you run **Voice Interaction**, the **Voice Interaction User Guide** appears on the screen. This Guide is different for each language supported by **Voice Interaction**.

## Setting up Voice Interaction

Turning the TV's verbal response (voice) on/off

🏠 > ⚙️ Settings > System > Expert Settings > Voice Interaction > Voice Feedback



Turn **Voice Feedback** on to have the TV respond verbally to your voice commands.

Selecting the voice's gender

🏠 > ⚙️ Settings > System > Expert Settings > Voice Interaction > Voice Gender

You can select the gender of the voice that responds to your voice commands.

## Running Voice Interaction




Press and hold the  button, say a command, and then release the  button. The TV recognizes the voice command.

- If the command is not recognized, try again with correct pronunciation.

## Viewing Broadcast Information at a Glance






See an overview of each channel's program lineup.

### Using the guide

 > Live TV > Guide  

In the Guide, you can see the daily program schedules for each broadcaster, see program information, choose a program to watch, and set up a schedule viewing or recording.


In the Guide, you can see only the TV programs scheduled after the current time.

-  The **Guide** also appears when you press the CH button while watching TV.
-  To see information about analog channels and use the analog channel functions of the **Guide**, you must finish the service provider settings in initial setup.
-  To view the **Guide**, you must first set the TV's clock ( >  **Settings** > **System** > **Time** > **Clock**).

After moving to a desired program, press and hold the Select button on the remote control. A pop-up window listing the following functions appears.


- **Scheduled viewing**

After selecting **Schedule Viewing**, you can schedule viewing of a broadcast scheduled program.

-  For more information about watching or **Schedule Viewing**, refer to "[Setting Up a Schedule Viewing](#)."

- **Scheduled recording**

After selecting **Schedule Recording**, you can schedule recording of a broadcast scheduled program.


-  Recording is not supported in the U.S.A. and Canada.

- **Detailed information**

After selecting **View details**, you can see detailed information about the selected program. The information may differ with the broadcast signal. If information is not provided with the program, nothing appears.


- **Displaying Schedule Manager or Recording & Schedule Manager**


After selecting **Schedule Manager**, you can see the **Schedule Manager** or **Recording & Schedule Manager** screen.

-  The actual name may differ by specific geographical area.

- **Recording**

After selecting **Record**, you can record the current broadcasting program.

-  Recording is not supported in the U.S.A. and Canada.

-  For more information about **Schedule Recording**, refer to "[Recording Programs](#)."

## Changing the broadcast signal

🏠 > Live TV > Channel List

After pressing the right directional button on your remote control, select Antenna to choose Air or Cable.

💡 You do not need to use this function if your TV is connected to a cable or satellite box.


## Checking digital channel signal info and strength

🏠 > ⚙️ Settings > Support > Self Diagnosis > Signal Information

💡 If your TV is attached to a separate, over-the-air antenna, you can use the signal strength information to adjust the antenna for increased signal strength and improved HD channel reception.

## Recording Programs

Record a current or upcoming program using a USB device instead of a video recorder.

The  appears next to the programs and channels scheduled for recording.

💡 This function is not available in the U.S.A. and Canada.

💡 Read all precautions before using the recording feature. Refer to "[Before Using the Recording and Timeshift Functions](#)" for more information.

💡 You can record only the programs that have been received through the antenna.

## Recording programs

Using the instant and schedule recording options from the guide screen

- **Instant Recording**

Select a live program from the Guide, press and hold the Select button, and then select Record to start recording.

- **Schedule Recording**

Select a program scheduled to be broadcast, press and hold the Select button, and then select Schedule Recording to set up a schedule recording of the scheduled program.

Using the instant and schedule recording options on the program info window

- **Instant Recording**

Press the Select button while watching a program to display the program info window. Press and hold the Select button, and then select Record to record the program.

- **Schedule Recording**

Press the Select button while watching a program to display the program info window. Use the left or right directional button to select a scheduled program. Press and hold the Select button, and then select Timeshift to set up a Schedule Recording of the scheduled program.

Using schedule recording to record on a specified date and time

🏠 > Live TV > Recordings > Scheduled > Schedule Recording

## Managing the schedule recording list

🏠 > Live TV > Recordings > Scheduled > Edit

Canceling a schedule recording

🏠 > Live TV > Recordings > Scheduled > Remove

## Viewing recorded programs

🏠 > Live TV > Recordings > Scheduled

Select the file containing the recording from the list. The file is played back.


🔍 Buttons that appear may differ depending on the file being played.



🔍 For more information about control buttons, refer to "[Buttons and functions available while recording a program or Timeshift.](#)"

🔍 **Highlight Player** is only available if you have saved highlights of a program that was recorded in **Sports Mode**.

## Setting Up a Schedule Viewing

Configure the TV to show a specific channel or program at a specific time and date.

The  appears next to programs that have been configured for a schedule viewing.

To set up a schedule viewing, you must first set the TV's clock (  >  Settings > System > Time > Clock ).

### Setting up a schedule viewing for a channel


Using the schedule viewing options from the guide screen


On the Guide screen, select a program you would like to view, press and hold the Select button, and then select Schedule Viewing in the pop-up menu that appears.

Using the schedule viewing options on the program info window

Press the Select button while watching TV. The Program Info window appears. Select a program that will be broadcast using the left or right directional buttons. Press and hold the Select button, and then select Schedule Viewing to schedule viewing of that program.


Using schedule viewing to view programs at a specified time on a specified date


(U.S.A and Canada)  > Live TV > Schedule Manager > Schedule Viewing

(Other countries)  > Live TV > Recordings > Scheduled > Schedule Viewing


### Editing a schedule viewing


(U.S.A and Canada)  > Live TV > Schedule Manager > Edit

(Other countries)  > Live TV > Recordings > Scheduled > Edit

 You can set up a maximum total of 30 Schedule Viewing and Schedule Recording entries.

Canceling a schedule viewing

(U.S.A and Canada)  > Live TV > Schedule Manager > Remove


(Other countries)  > Live TV > Recordings > Scheduled > Remove

## Using Timeshift

Play, pause, or rewind live TV.

You can pause and rewind live TV by using Timeshift. Activating this function disables the Broadcasting function.


- ✎ This function is not available in the U.S.A. and Canada.
- ✎ To use Timeshift, you must connect a USB device for recording.
- ✎ Read all precautions before using the Timeshift function. For more information, refer to ["Before Using the Recording and Timeshift Functions."](#)

To activate the Timeshift function while watching TV, press and hold the Select button, and then select  in the Program Info window.

- ✎ For more information about control buttons, refer to ["Buttons and functions available while recording a program or Timeshift."](#)



## Using the Channel List

Change the channel or check programs on other digital channels.

 > Live TV > Channel List

By using the Channel List, you can change the channel or check programs on other digital channels while watching TV.

The All Channels screen contains the following icons:

-  : A favorite channel
-  : The channel that is being watched

If you press the right directional button when viewing the Channel List screen, you can use the following functions:

- All Channels

Displays the channels that the TV found during the Auto Program channel search.

- Favorites

Displays favorites lists 1 to 5.

- Air or Cable


Allows you to select Air or Cable as the DTV mode. Air is suitable for homes equipped with separate, over-the-air antennas. Cable is suitable for homes that subscribe to a local cable-service or satellite-service provider. You do not need to use this function if your TV is connected to a cable or satellite box.

## Editing channels

Edit the channels stored on your TV.

 > Live TV > Channel List > All Channels > Edit

The All Channels screen contains the following icons:

-  : A favorite channel

## Re-registering and deleting a channel

### Removing registered channels

To remove a channel, select it, and then select Delete. To remove all channels, select Select All > Delete.

### Adding back removed channels




You can add back removed channels from the Edit Channel list only. Removed channels are displayed in gray in the All Channels list. To display the Edit Channel list, select Live TV > Channel List > All Channels > Edit. Then, to add back a removed channel, select it, and then select Restore. To add back all removed channels, select Select All > Restore.

## Editing registered channels



You can access the following options by selecting All Channels > Edit:


- Rename channels


## Using Program Rating Lock

 >  Settings > Broadcasting > Program Rating Lock 

This function is useful for controlling what children watch on TV. Program Rating Lock does not, however, block programs originating from external sources, such as Blu-ray players, DVD players, or USB files.

Every time you access Program Rating Lock, you must enter the security PIN. You must also enter this PIN to watch a blocked program. The default PIN is 0000. To change the PIN, go to  >  Settings > System > Expert Settings > Change PIN.

 Program Rating Lock may not be supported depending on your input signal.

 For more information about the rating system of different countries, refer to ["Blocking programs based on their TV Rating."](#)




Watching blocked / restricted programs

To watch a blocked program, enter the PIN when requested.


When initially showing a restricted program or movie, the screen is blank because the Program Rating Lock blocks it. Enter the PIN to unblock the program when a message appears requesting the code.


## Creating a Personal Favorites List

Designate frequently watched channels as favorite channels.


Favorite channels are highlighted in the Edit Channel and All Channels screens with the  symbol.


### Registering channels as favorites

 > Live TV > Channel List

1. Press the right directional button on your remote control.
2. Select Favorites.
3. Select one of the five favorites lists.
4. Move to Edit Favorites.
5. Select a channel to add in the favorites list.
6. Select . The selected channel is registered in the favorites list.


### Viewing and selecting channels on Favorites lists only

 > Live TV > Channel List

1. Press the right directional button on your remote control.
  2. Select Favorites.
  3. Select the desired list among the five favorites lists on the screen. The channels in the selected favorites list appear.
-  Only favorites lists that contain registered channels will display channels.


## Editing a Favorites List

Edit a favorites channel list.

 > Live TV > Channel List

After pressing the right directional button on your remote control, select Favorites > Favorites 1 - Favorites 5 > Edit. The Edit Favorites screen appears.

## Removing channels from a favorites list

Select channels in a favorites list, and then select the  button.

## Rearranging a favorites list

Select one or more channels, and then select Change Order. The Change Order highlight appears. Press the up/down directional buttons to indicate the new location for the channels. Press the Select button to set the channels into their new location.

## Renaming a favorites list



Select the favorites list you want to rename, and then select Rename Favorites. Enter a new name using the on-screen keyboard that appears, and then select Done.

## Making Sports Programs More Realistic with Sports Mode



Make sporting events appear and sound more realistic as if you are actually there.

 >  Settings > Picture > Special Viewing Mode > Sports Mode or Soccer Mode 

You can use Sports Mode to get optimal picture and sound settings for soccer events, making them appear and sound as if you are there. In addition, if a recording device is connected to the TV when you are using Sports Mode, you can view highlights extracted from the recorded sporting event automatically or manually.




-  The actual name of this function may differ by specific geographical area.
-  Enabling Sports Mode changes Picture Mode to Stadium and Sound Mode to Stadium, and disables some Picture and Sound menus.

## Extracting highlights automatically

 >  Settings > Picture > Special Viewing Mode > Soccer Mode > Auto Highlights





Auto Highlights is not available:

- When you are switching the input signal
- When Video Description is On
- When you are viewing the content saved on a USB storage device

- When the Smart View function is running
  - When you are viewing highlights of the current soccer game in the UHD resolution using the Highlight Player function
  - While watching an analog program
-  This function is not available in the U.S.A. and Canada.
-  The performance of **Auto Highlights** depends on the characteristics of the transmitted signal.
-  It is advisable to use **Auto Highlights** only while watching a soccer game. If you use this function for other sporting events, it may display irrelevant picture frames.

## Viewing a game recorded in sports mode




You can view a recorded game saved on a USB storage device.



-  Recording is not available in the U.S.A. and Canada.
-  For more information about the functions, refer to "[Buttons and functions available while using sports mode.](#)"
-  This function is not available on certain models in specific geographical areas.
-  For more information, refer to "[Viewing recorded programs.](#)"

## TV-Viewing Support Functions




Use the functions that are supported by digital or analog channels:

### Scanning for available channels



  **Settings** > **Broadcasting** > **Auto Program** 

-  Do not use this function if your TV is connected to a cable or satellite box.
-  If the TV has saved channels, **Auto Program** deletes the existing list, and then saves the newly scanned channels.

## Configuring advanced broadcasting settings



 >  Settings > Broadcasting > Expert Settings 

### Selecting the broadcast audio language

 >  Settings > Broadcasting > Expert Settings > Audio Options



Audio Options functions differently for analog and digital channels.

#### Selecting a Language



 >  Settings > Broadcasting > Expert Settings > Audio Options > Preferred Language


This is the language you will hear while watching TV if the language is included in the broadcast signal.

#### Listening to Multi-Track Sound

 >  Settings > Broadcasting > Expert Settings > Audio Options > Multi-Track Sound

### Fine-tuning analog broadcasts


 >  Settings > Broadcasting > Expert Settings > Fine Tune

 This function is only available for analog broadcasts.

## Adjusting the Picture Quality

Change the Picture Mode and adjust Expert Settings.


### Choosing a picture mode

🏠 > ⚙️ Settings > Picture > Picture Mode 

You can select the Picture Mode that provides the best viewing experience.


- **Dynamic**  
Makes the picture brighter and clearer in bright viewing environments.
- **Standard**  
Is the default mode suitable for general viewing environments.
- **Natural**  
Reduces eye strain for a comfortable viewing experience.
- **Movie**  
Is suitable for watching TV or movies in a dark room.

### Configuring advanced picture settings


🏠 > ⚙️ Settings > Picture > Expert Settings 

Configure the screen settings to your taste by using the following functions:

- **Backlight**
- **Brightness**
- **Contrast**
- **Sharpness**
- **Color**
- **Tint (G/R)**
- **Apply Picture Settings**
- **Digital Clean View**

 **Auto Visualization** is only available for analog broadcasts.


- **Auto Motion Plus**

 When **LED Clear Motion** is set to **On**, the screen appears darker than when it is **Off**.


- **Film Mode**


 This function is only available when the input signal is TV, AV, Component (480i, 1080i), or HDMI (1080i).


- **Smart LED**


 This function is not available on certain models in specific geographical areas.

- **HDMI UHD Color**


 When you set the HDMI connection to **On**, the TV turns off and then on automatically.

 The HDMI connection with **HDMI UHD Color** set to **Off** supports up to UHD 50P/60P 4:2:0 input signals, while the HDMI connection with **HDMI UHD Color** set to **On** supports up to UHD 50P/60P 4:4:4 and 4:2:2 input signals. For more information, refer to "[Supported Resolutions for UHD Input Signals](#)."

 For the SUHD models, each HDMI connection can be individually optimized for **HDMI UHD Color**. For the UHD models, make sure to connect to the HDMI IN 1 port of the TV.

 When you connect the TV to an external device that supports only the UHD 24 or 30 Hz frequency or any FHD frequency, the HDMI UHD Color function may not be available. In this case, set **HDMI UHD Color** to **Off**.


- **HDMI Black Level**

 This function is only available when the input signal, connected to the TV via an HDMI connector, is set to RGB444.

- **Dynamic Contrast**

- **Color Tone**

 **Cool** and **Standard** are only available when **Picture Mode** is set to **Dynamic**.

 **Color Tone** is only available when the TV is connected to a computer via an HDMI-to-DVI cable.

- **White Balance**

- **Gamma**

- **RGB Only Mode**



- **Color Space**

- **Reset Picture**







## Picture Support Functions

Configure the picture settings for your TV.



### Viewing a picture-in-picture (PIP)

 >  Settings > Picture > PIP

While viewing video from an external device such as a Blu-ray player on the main screen, you can watch a TV broadcast in a picture-in-picture (PIP) window.


-  This function is not available in the U.S.A. and Canada.
-  This function is not available on certain models in specific geographical areas.
-  PIP is not available while **Smart Hub** is active.
-  Playing a game or using the karaoke function on the main screen can result in lower PIP picture quality.
-  The PIP function is only available under the following conditions: 1) The main screen's source is a Component or HDMI connection. 2) The input resolution is less than FHD (Full HD).
-  The PIP window supports digital channels only and does not support UHD channels.

### Viewing a HDR mode


 >  Settings > Picture > Expert Settings > HDR+ Mode

Automatically provide an optimal HDR effect based on the video source.

The HDR (High Dynamic Range) technology implements video image that is very similar to the image shown through human eyes by finely adjusting the contrast of the source.

-  This function is only available on certain models in specific geographical areas.

## Changing the picture size

🏠 > ⚙️ Settings > Picture > Picture Size 

You can change the size of the picture displayed on the TV screen.

- 16:9 Standard
- Custom
- 4:3

⚠️ Do not watch your TV in 4:3 mode for extended periods of time. This action can cause the black bars, which appear at the top, bottom, left, and right sides of the screen in 4:3 mode, to "burn in" and appear as temporary or permanent after images on the screen. If the TV is used for commercial or non-normal consumer use, then damage to the screen caused by screen "burn in" is not covered by your Warranty.

🔍 Supported picture sizes differ with the input signal. For more information about supported picture sizes, refer to "[Picture sizes and input signals](#)."

## Fitting the picture to the screen

🏠 > ⚙️ Settings > Picture > Picture Size > Fit to Screen

🔍 The availability of this function depends on the **Picture Size**.



## Adjusting the picture size and/or position

🏠 > ⚙️ Settings > Picture > Picture Size > Zoom/Position

🔍 The availability of this function depends on the **Picture Size**.



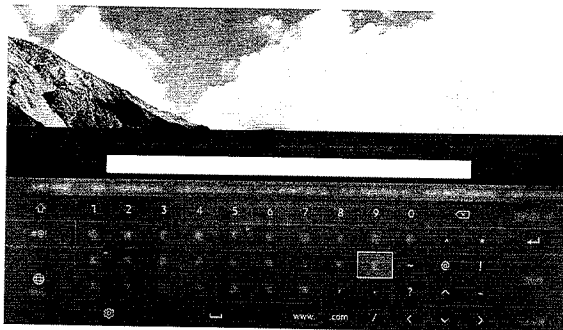
## Setting up the keyboard


In  >  Settings > System > Input Device Manager, you can set the following functions.

- Keyboard Language
- Keyboard Type
- Input Language Shortcut


## Entering Text using the On-Screen QWERTY Keyboard


Use the QWERTY keyboard to enter text on your TV.



 The image on your TV may differ from the image above depending on your model and geographical area.

## Using additional functions

Select  on the QWERTY keyboard screen. The following options are available:

 The options available may differ depending on the function running currently.

- Recommended text
- Reset recommended text data
- Predict Next Character (when using direction buttons)
- Language

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Covered by one or more of the following U.S. patents:

7,295,673; 7,460,668; 7,515,710; 8,656,183; 8,731,369; RE45,052.



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